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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/694,074	10/20/2000	Rebecca J. Jackman	H0498/7085 TJO	2002

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EXAMINER	
PARKER, FREDERICK JOHN	
ART UNIT	**PAPER NUMBER**
1762	

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/694,074	JACKMAN ET AL.	
	Examiner	Art Unit	
	Frederick J. Parker	1762	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *07 June 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 51-62 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 51-62 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 6-10-04
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6-7-04 has been entered.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claim 51 is rejected under 35 U.S.C. 102(b) as being anticipated by Harrison et al US 5948470.

Harrison et al teaches a method comprising;

Coating/ shielding a substrate with a copolymer masking film material (PDMS) having openings/ apertures formed therein by selective removal typically in the width (lateral) range of 5-100 nm (col. 2, 46-60 & Example 1 (20 nm)) which is less than 1 mm, leaving shielded and unshielded portions of the underlying substrate, and selectively applying/ coating material into the unshielded portions to form a pattern on the substrate (col. 5, 6-15). There is no evidence whatsoever that applying the polymeric mask, which is in conformal contact with the substrate , degrades the mask proximate the openings / unshielded portions of the surface. The masking film is applied by solution coating means (col. 4, 1-6).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claim 52 is rejected under 35 U.S.C. 103(a) as being unpatentable over Harrison et al.

Harrison et al is cited for the same reasons previously discussed, which are incorporated herein. While a "curved" substrate article is not cited, the reference is not limited as to substrates of a specific shape. Given the fact the maskant is a liquid polymeric material, one skilled in the art would have recognized the obviousness of the application of a masking coat to a substrate surface which is not entirely planar because of the expectation of providing desired coverage of the surface. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the process of Harrison et al by applying the coating material to non-planar substrate surfaces to provide a uniform maskant coat and subsequent uniform patterned coatings thereon.

8. Claims 51-62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rustomji US 4511599 in view of Smith US 4119745.

Rustomji teaches a method for forming thin-film EL panels comprising masking a surface with a thin flexible steel mask, the mask having open (second portions) and reinforcing portions (first portions) including 7-10 mil features (col. 3, 31-34) which are "less than 1 mm", the openings defining electrodes; holding the mask flush and magnetically adhered to the substrate ("conformal contact"); and depositing metal vapor through openings to form the electrodes for an EL device. No degradation of the mask is cited, not can any occur without departing from the spirit and intent of the reference. Rustomji further discloses the method comprises after first film deposition , shifting and re-orienting the mask relative to the metal deposition, to a second

position where a second deposition is made holding the mask to the substrate, such that portions of the substrate previously covered are now coated, per claim 53 and 55. The first portion is unshielded per claim 54. Rustomji teaches forming metal electrodes by vapor deposition without limitation as to number of coating agents applied to form the electrodes. Since electrodes are commonly formed of plural conductive materials, dependant on their intended function, it is the Examiner's position that the use of plural coating agents applied on a substrate would have been within the purview of one skilled in the art, per claim 62. Use of a polymeric masking system is not taught.

Smith et al teaches a method for forming EL display devices in which electrodes are deposited using shadow mask patterning means having apertures through which electrode material is deposited using first and second superimposed masks (per claim 56-57), to form perpendicular patterns as shown in figure 1. Thus, Rustomji and Smith e al relate to the same subject matter, namely forming electrodes on substrates by deposition through masking means. While Rustomji is directed to flexible metal masks, col. 3, 24-43 of Smith et al teaches the use of masks "of any suitable material" including of polymer resin (e.g. polyvinyl chloride, & encompassing an elastomeric polymer, per claim 59) masking materials as suitable, so that the use of any one would have been expected to provide equivalent outcomes. Both flexible metals and polymers would have made conformal contact with substrate surfaces because of their pliability/ flexibility, including substrates which are non-planar.

Smith discloses forming electrodes for EL devices in which first and second overlaying masks are adhesively secured to a substrate ("conformal contact"), the first mask disposed against the substrate. The masks are disposed so mask apertures are aligned, and depositing coating material

through the apertures. Masks may be plastic/ polymeric. Removal of the top mask, followed by forming an additional electrode is further disclosed per claim 60. Removing and replacing sets of masks to form electrode patterns across a surface, per claim 61, would have been an obvious variation within the purview of the skilled artisan in view of the combination of references, particularly the shifting and reorientation of masks as taught by Rustomji.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rustomji by utilizing plural, successive masks of suitable materials, such as polymeric materials, as disclosed by Smith for an EL electrode forming process because of the expectation of forming complex electrode patterns on EL substrates.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Frederick J. Parker whose telephone number is 571/ 272-1426. The examiner can normally be reached on Mon-Thur. 6:15am -3:45pm, and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on 571/272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Frederick J. Parker
Primary Examiner
Art Unit 1762

fjp